

**Application of S. Jacobson et al.
Application No. 10/758,718
Docket No. 1875-0532.3**

**Art Unit 1753
Examiner A. S. Noguera
Confirmation No. 6560**

REMARKS

The Applicants respectfully request reconsideration of the various grounds of rejection set forth in the Official Action for the following reasons.

The Specification

The Specification has been amended to conform the priority claim to the requirements of 37 CFR §1.78. No new matter is added by the amendment.

35 USC §101: Claims 1, 2, 3, and 19

The Examiner rejected Claims 1, 2, 3, and 19 under 35 USC §101 in view of US Patent No. 6,790,328 ('328 patent). In making the rejection the Examiner asserted that Claim 1 claims the same invention as Claim 9 of the '328 patent, that Claim 2 claims the same invention as Claim 10 of the '328 patent, that Claim 3 claims the same invention as Claim 12 of the '328 patent, and that Claim 19 claims the same invention as Claim 11 of the '328 patent.

The Applicants believe that this rejection should be withdrawn because Claims 9 to 12 of the '328 patent should not have been issued in that patent. In other words, the Patent Office issued the '328 patent with the wrong claims for Claims 9 to 12.

The Applicants, who are also the named inventors on the '328 patent, filed a Request for a Certificate of Correction of the '328 patent on November 15, 2007 to have Claims 9 to 12 corrected. A true and correct copy of the Request for Certificate of Correction is enclosed with this response along with the acknowledgment letter from the USPTO PAIR System. Since it will

Application of S. Jacobson et al.
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Docket No. 1875-0532.3

Art Unit 1753
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take some time for the certificate of correction to be issued, the Applicants are requesting, pursuant to 37 CFR §1.103(a), that further examination of this application be suspended until the Certificate of Correction is issued. A petition for such relief is being submitted contemporaneously with this response.

Upon issuance of the Certificate of Correction, it is believed that the grounds for the rejection of Claims 1, 2, 3, and 19 under 35 USC §101 in the present application will no longer be proper. Therefore, the rejection should be withdrawn at such time.

Non-Statutory Double Patenting: Claims 4 to 18

The Examiner rejected Claims 4 to 18 under the court created doctrine of obviousness type double patenting. In making those rejections, the Examiner relied on Claims 9 to 12 of the '328 patent either alone or in combination with other claims of the '328 patent. However, in view of the fact that Claims 9 to 12 were not properly issued in the '328 patent, it is believed that these rejections are also improper and will become moot when the certificate of correction is issued for the '328 patent. Therefore, these rejections should also be withdrawn at such time.

35 USC 112, Second Paragraph: Claim 12

The Examiner rejected Claim 12 under the second paragraph of 35 USC §112. In making the rejection the Examiner explained that the phrase "the means for transporting the buffer material" appears twice in succession in the text of Claim 12. The Examiner concluded that the redundancy renders the claim too indefinite to meet the requirements of the second paragraph of Section 112.

Application of **JACOBSON** and **RAMSEY**
Application No. 09/759,590

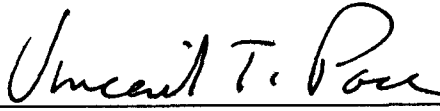
Claim 12 has been amended to remove the second occurrence of the phrase "the means for transporting the buffer material". Accordingly, it is believed that this rejection is overcome.

CONCLUSION

For all of the foregoing reasons, it is believed that, subject to the issuance of the certificate of correction for the '328 patent, all of the claims in this application will be in condition for allowance.

Respectfully submitted,

DANN, DORFMAN, HERRELL AND SKILLMAN
A Professional Corporation
Attorneys for Applicant(s)

By 

VINCENT T. PACE
PTO Registration No. 31,049

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Enclosure: Copy of Request for Certificate of Correction
Acknowledgment Letter

Electronic Acknowledgement Receipt

EFS ID:	2472419
Application Number:	09759590
International Application Number:	
Confirmation Number:	9415
Title of Invention:	MICROFLUIDIC DEVICE AND METHOD FOR FOCUSING, SEGMENTING, AND DISPENSING OF A FLUID STREAM
First Named Inventor/Applicant Name:	Stephen C. Jacobson
Customer Number:	110
Filer:	Vincent T. Pace/Frances Walton
Filer Authorized By:	Vincent T. Pace
Attorney Docket Number:	1875-0532.1
Receipt Date:	15-NOV-2007
Filing Date:	12-JAN-2001
Time Stamp:	15:06:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Certificate of Correction	ReqForCertCorrection.pdf	721854 8328f2311e3405e26ed3d999f57706992 c92697b	no	22

Warnings:

Information:

2	Request for Certificate of Correction	PTOSB44.pdf	145042	no	3
			7ad3ac6c6d30295917e37defc19d10797 c57662b		

Warnings:

Information:

Total Files Size (in bytes):	866896
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Patent of	:	Attorney Docket No. 1875-0532.1
	:	
STEPHEN C. JACOBSON et al.	:	ATTENTION: CERTIFICATE OF
	:	CORRECTION BRANCH
Patent No. US 6,790,328 B2	:	
	:	
Issued: September 14, 2004	:	
	:	
For: MICROFLUIDIC DEVICE AND	:	
METHOD FOR FOCUSING,	:	
SEGMENTING, AND	:	
DISPENSING OF A FLUID	:	
STREAM	:	

REQUEST FOR A CERTIFICATE OF CORRECTION
UNDER 37 C.F.R. §1.322

A Certificate of Correction is hereby requested for the above-identified patent. The errors made by the Patent and Trademark Office are as follows:

In the Claims

Column 10: Claim 9 should read as follows.

9. A method of spatially confining a material stream in a microfluidic device, said method comprising the steps of:

providing a microfluidic device that includes a substrate having first, second, third, and fourth microchannels formed therein, wherein said first, second, third, and fourth microchannels communicate at a first intersection, said first microchannel is connected to a source of a first material, and said third and fourth microchannels each contain buffer material;

providing a first focusing channel in said substrate having one end in fluid communication with a source of a focusing material and a second end in fluid communication with said first channel between said source of the first material and the first intersection;

transporting a stream of the first material through said first channel toward the first intersection, said stream of first material having a width;

transporting a stream of the focusing material from the first focusing channel into said first channel, such that the width of the stream of first material in said first channel is narrowed;

transporting streams of the buffer material through the third and fourth channels into said first channel; and

controlling flow of the buffer material from the third and fourth channels into the first channel such that the buffer material expands, maintains, or further. confines the stream the first material.

Column 10: Claim 10 should read as follows.

10. A method as set forth in Claim 9 comprising the steps of:

providing a second focusing channel in said body having one end in fluid communication with a source of focusing material and a second end in fluid communication with said first channel between the source of the first material and the first intersection; and

transporting a second stream of the focusing material from the second focusing channel into said first channel such that the width of the stream of the first material in said first channel is narrowed .

Column 10: Claim 11 should read as follows.

11. A method as set forth in Claim 10 wherein the first material, the focusing streams, and the buffer material are transported through their respective microchannels electrokinetically, by pressure, or by a combination of electrokinetic and pressure driven means.

Column 10: Claim 12 should read as follows.

12. A method as set forth in Claim 9 wherein the first material, the focusing stream, and the buffer material are transported through their respective microchannels electrokinetically, by pressure, or by a combination of electrokinetic and pressure driven means.

Patent No. US 6,790,328 B2
Issued September 14, 2004

REMARKS

The patent owner hereby requests that the foregoing corrections be made in US Patent No. 6,790,328 which issued on September 14, 2004. The errors for which correction is sought were made entirely by the Patent and Trademark Office. Following is an explanation of why the errors in the patent are the fault of the Office.

In the Notice of Allowability mailed on October 2, 2003, Claims 1, 3-9, 17, 18, 20, 21, 23-25, 27, 28, 39-47, and 53-56 were allowed. (A true and correct copy of the Notice of Allowability is attached as Exhibit 1 hereto.) On December 22, 2003, the Applicants submitted an amendment pursuant to 37 CFR 1.312 cancelling Claims 17, 18, 20, 21, 23-25, 27, 28, 39-47, and 53. (A true and correct copy of the Rule 312 amendment is attached as Exhibit 2.) In an official communication mailed on June 7, 2004, the Examiner entered the amendment under Rule 312 thereby cancelling the aforesaid claims. In that communication, the Examiner indicated that Claims 1, 3-9, and 54-57 were allowed. (A true and correct copy of the Examiner's communication is attached as Exhibit 3 hereto.) The patent issued on September 14, 2004 with twelve (12) claims. As a result of the Rule 312 amendment, Claims 9-12 of the patent should correspond to application Claims 54, 55, 57, and 56, respectively. However, a review of the text of Claims 9-12 show that they correspond to Claims 17, 18, 53, and 20, respectively. Therefore, it appears that when issuing the patent, the Office incorrectly prepared patent Claims 9-12 from the wrong application claims because application Claims 17, 18, 53, and 20 were properly and timely cancelled.

We are enclosing Certificate of Correction Form PTO/SB/44 listing the corrections to be made in the above-identified patent.

Patent No. US 6,790,328 B2
Issued September 14, 2004

CONCLUSION

In view of the foregoing it should be clear that there are errors in US Patent 6,790,328 and that the errors occurred solely by the fault of the Patent Office. Accordingly, it is believed that correction of the patent is appropriate and a certificate of correction is respectfully requested.

DANN, DORFMAN, HERRELL AND SKILLMAN
A Professional Corporation
Attorneys for Patentees

November 15, 2007

By Vincent T. Pace
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Enclosure: Form PTO/SB/44
Exhibits 1-3

Patent No. US 6,790,328 B2
Issued September 14, 2004

EXHIBIT 1

Notice of Allowability

Application No.

09/759,590

Examiner

ALEX NOGUEROLA

Applicant(s)

JACOBSON ET AL.

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/29/2003.
2. ☒ The allowed claim(s) is/are 1, 3-9, 17, 18, 20, 21, 23-25, 27, 28, 39-47, and 53-56.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.
5. ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☒ CORRECTED DRAWINGS must be submitted.
 - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☒ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. <u>11</u> . |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____ | 6 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

Patent No. US 6,790,328 B2
Issued September 14, 2004

EXHIBIT 2

IN THE UNITED STATE PATENT AND TRADEMARK OFFICE

In re the Application of	: Docket No. 1875-0532.1
STEPHEN C. JACOBSON et al.	:
Application No.09/759,590	: Group Art Unit 1753
Filed: January 12, 2001	: Examiner A. NOGUEROLA
For: MICROFLUIDIC DEVICE AND	:
METHOD FOR FOCUSING,	:
SEGMENTING, AND DISPENSING	:
OF A FLUID STREAM	:

AMENDMENT UNDER 37 C.F.R. 1.312

Please amend the above-referenced patent application as follows.

In the Claims

Cancel Claims 17, 18, 20, 21, 23-25, 27, 28, 39-47, and 53 as set forth below.

- 1.(Previously Amended) An apparatus for the spatial confinement of a material stream, comprising:
- a chamber formed in a surface of a substrate;
 - a sample channel formed in the surface of the substrate for conducting a sample stream therethrough, said sample channel having a first end in fluid communication with a source of a sample material and a second end in fluid communication with said chamber;
 - a focusing channel formed in the surface of the substrate for conducting a focusing stream therethrough, said focusing channel having a first end in fluid communication with a source of focusing material and a second end in fluid communication with said chamber;
 - a waste channel formed in the surface of the substrate, said waste channel having a first end in fluid communication with said chamber and a second end

in fluid communication with a waste reservoir;

a buffer channel formed in the surface of the substrate for conducting a buffer stream therethrough, said buffer channel having a first end in fluid communication with a source of a buffer material and a second end in fluid communication with said chamber;

means for driving the respective streams of the sample and focusing materials through the respective channels into said chamber, whereby the focusing stream spatially confines the sample stream within said chamber; and

means for driving the buffer fluid through said buffer channel into said chamber such that the buffer material acts on the spatially confined sample stream.

2.(Previously Canceled)

3.(Previously Amended) An apparatus as set forth in Claim 1 further comprising a collection channel formed in the surface of the substrate for conducting a material stream therethrough, said collection channel having a first end in fluid communication with said chamber and a second end in fluid communication with a waste reservoir, said collection channel being adapted to conduct buffer fluid; and

means for driving buffer material in said collection channel into said chamber such that the buffer material acts on the spatially confined sample stream.

4.(Previously Amended) An apparatus as set forth in Claim 1 wherein said means for driving the streams of the sample and focusing materials through the respective channels into said chamber comprises a means selected from the group consisting of electrokinetic means for driving the respective streams, pressure-driven means for driving the respective streams, and a combination thereof.

5.(Previously Amended) An apparatus as set forth in Claim 1 wherein said means for driving the streams of the sample and focusing materials through the respective channels into said chamber and said means for driving the buffer material through said buffer channel into said chamber comprise a means selected from the group consisting of electrokinetic means for driving the respective streams, pressure-driven means for driving the respective streams, and a combination thereof.

6.(Previously Amended) An apparatus as set forth in Claim 3 wherein said means for driving the streams of the sample and focusing materials through the respective channels into said chamber, said means for driving the buffer material through said buffer channel into said chamber, and said means for driving the buffer material through said collection channel comprise a means selected from the group consisting of electrokinetic means for driving the respective streams, pressure-driven means for driving the respective streams, and a combination thereof.

7.(Previously Amended) An apparatus as set forth in Claim 1, 3, 4, 5, or 6 further comprising a second focusing channel formed in the surface of the substrate for conducting a second focusing stream therethrough, said second focusing channel having a first end in fluid communication with a source of focusing material and a second end in fluid communication with said chamber, said second end of said second focusing channel being positioned and arranged to provide said focusing material into said chamber such that the sample stream can be spatially confined in said chamber; and means for driving the focusing material in said second focusing channel such that said sample stream is spatially confined in said chamber.

8.(Previously Amended) An apparatus as set forth in Claim 7 wherein said means for driving the focusing material in said second focusing channel comprises a means selected from the group consisting of electrokinetic means for driving the focusing material, pressure-driven means for driving the focusing material, and a combination thereof.

9.(Previously Amended) An apparatus as set forth in Claim 7 wherein said focusing material driving means comprises means for controlling the flow of the focusing material in said first and second focusing channels such that the sample stream is spatially confined substantially along the center axis of said chamber.

10.(Previously Canceled)

11.(Previously Canceled)

12.(Previously Canceled)

13.(Previously Canceled)

14.(Previously Canceled)

15.(Previously Canceled)

16.(Previously Canceled)

17.(Canceled)

18.(Canceled)

19.(Previously Canceled)

20.(Canceled)

21.(Canceled)

22.(Previously Canceled)

23.(Canceled)

24.(Canceled)

Application No. 09/759,590
Docket No. 1875-0532.1

Examiner A NOGUEROLA
Art Unit 1753

- 25.(Canceled)
- 26.(Previously Canceled)
- 27.(Canceled)
- 28.(Canceled)
- 29.(Previously Canceled)
- 30.(Previously Canceled)
- 31.(Previously Canceled)
- 32.(Previously Canceled)
- 33.(Previously Canceled)
- 34.(Previously Canceled)
- 35.(Previously Canceled)
- 36.(Previously Canceled)
- 37.(Previously Canceled)
- 38.(Previously Canceled)
- 39.(Canceled)
- 40.(Canceled)
- 41.(Canceled)
- 42.(Canceled)
- 43.(Canceled)
- 44.(Canceled)
- 45.(Canceled)
- 46.(Canceled)
- 47.(Canceled)
- 48.(Previously Canceled)
- 49.(Previously Canceled)
- 50.(Previously Canceled)

51.(Previously Canceled)

52.(Previously Canceled)

53.(Canceled)

54.(Previously Added) A method of spatially confining a material stream in a microfluidic device, said method comprising the steps of:

providing a microfluidic device that includes a substrate having first, second, third, and fourth microchannels formed therein, wherein said first, second, third, and fourth microchannels communicate at a first intersection, said first microchannel is connected to a source of a first material, and said third and fourth microchannels each contain buffer material;

providing a first focusing channel in said substrate having one end in fluid communication with a source of a focusing material and a second end in fluid communication with said first channel between said source of the first material and the first intersection;

transporting a stream of the first material through said first channel toward the first intersection, said stream of first material having a width;

transporting a stream of the focusing material from the first focusing channel into said first channel, such that the width of the stream of first material in said first channel is narrowed;

transporting streams of the buffer material through the third and fourth channels into said first channel; and

controlling flow of the buffer material from the third and fourth channels into the first channel such that the buffer material expands, maintains, or further confines the stream the first material.

55.(Previously Amended) A method as set forth in Claim 54 comprising the steps of:

providing a second focusing channel in said substrate having one end in fluid communication with a source of focusing material and a second end in fluid communication with said first channel between the source of the first material and the first intersection; and

transporting a second stream of the focusing material from the second focusing channel into said first channel such that the width of the stream of the first material in said first channel is narrowed .

56.(Previously Added) A method as set forth in Claim 54 wherein the first material, the focusing stream, and the buffer material are transported through their respective microchannels electrokinetically, by pressure, or by a combination of electrokinetic and pressure driven means.

57.(Previously Added) A method as set forth in Claim 55 wherein the first material, the focusing streams, and the buffer material are transported through their respective microchannels electrokinetically, by pressure, or by a combination of electrokinetic and pressure driven means.

REMARKS

By the foregoing amendments Claims 17, 18, 20, 21, 23-25, 27, 28, 39-47, and 53 have been canceled. Those claims are being canceled so that the Applicants can file a divisional application directed to the invention set forth in those claims. Therefore, it is respectfully requested that the foregoing amendments be entered prior to issuance of the patent on this application.

Application No. 09/759,590
Docket No. 1875-0532.1

Examiner A NOGUEROLA
Art Unit 1753

The Applicants have noted that the Notice of Allowability issued on October 2, 2003 (part of Paper No. 112) indicates that Claims 1, 3-9, 17, 18, 20, 21, 23-25, 27, 28, 39-47, and 53-56 are allowed. However, Applicants note that Claim 57 was presented in the Applicants' response filed by facsimile on September 29, 2003 and presumably was entered. Claim 57 was not rejected by the Examiner, it has not been canceled by the Applicants, nor was it canceled in the Examiner's Amendment. Accordingly, Applicants hereby request that the USPTO records be corrected to indicate that Claim 57 is allowed so that the patent will include Claim 57 when issued. If the Examiner has any question about this matter, he is respectfully requested to contact the Applicants' undersigned attorney.

AUTHORIZATION TO CHARGE DEPOSIT ACCOUNT

In the event a fee is required and is not enclosed, or the check is improper, or the fee calculation is in error, the Commissioner is authorized to charge any underpayment or credit any overpayment to the account of the undersigned attorneys, Account No. 04-1406. A duplicate copy of this sheet is enclosed.

Respectfully submitted,
DANN, DORFMAN, HERRELL AND SKILLMAN
A Professional Corporation
Attorneys for Applicants

By Vincent T. Pace
Vincent T. Pace
PTO Registration No. 31,049

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(Docket 1875-0532.1)

In re the Application of

STEPHEN C. JACOBSON et al.

Appln. No. 09/759,590

Filing Date: January 12, 2001

For: MICROFLUIDIC DEVICE AND METHOD :
FOR FOCUSING, SEGMENTING, AND :
DISPENSING OF A FLUID STREAM :

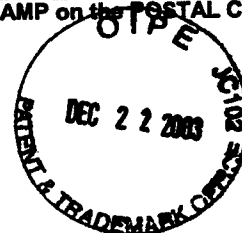
:The following paper(s) has/have been received:
:- Transmittal Form (PTO/SB/21);
:- Fee Transmittal (PTO/SB/17);
:- Certificate of Mailing including PTOL-85, Part B
: (In duplicate);
:- Amendment under 37 CFR 1.312;
:- Submission of Formal Drawings;
:- Formal Drawings: 6 sheets;
:- Government Issue & Publication Fees
: (non-small entity): check in the amount of \$1630.00

Patent and Trademark Office is respectfully requested to place its STAMP on the POSTAL CARD
and place it in the outgoing mail.

Respectfully,

December 19, 2003

VTP



Patent No. US 6,790,328 B2
Issued September 14, 2004

EXHIBIT 3



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,590	01/12/2001	Stephen C. Jacobson	1875-0532.1	9415
000110	7590	06/07/2004	EXAMINER	
DANN, DORFMAN, HERRELL & SKILLMAN 1601 MARKET STREET SUITE 2400 PHILADELPHIA, PA 19103-2307			NOGUEROLA, ALEXANDER STEPHAN	
			ART UNIT	PAPER NUMBER
			1753	

DATE MAILED: 06/07/2004

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 244 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 244 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

Notice of Allowability

Application No.

09/759,590

Examiner

ALEX NOGUEROLA

Applicant(s)

JACOBSON ET AL.

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/22/2003.
2. ☒ The allowed claim(s) is/are 1,3-9, and 54-57.
3. ☒ The drawings filed on 22 December 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☒ Other Response to Rule 312 Amendment.

Alex Nogueroles
Primary Examiner
Art Unit: 1753

DETAILED ACTION

Drawings

1. The drawings were received on December 22, 2003. These drawings are accepted by the examiner.

Response to the Amendment under 37 C.F.R. 1.312

2. Applicants seek to cancel claims 17, 18, 20, 21, 23-25, 27, 28, 39-47, and 53 "so that Applicants can file a divisional application directed to the invention set forth in those claims." These claims will be cancelled; however, Applicants should note that the examiner has not found a restriction requirement in the file. So, a subsequent application based on these cancelled claims will be construed as a continuation application and may be subject to double patenting rejections.

3. As Applicants have noted in the Amendment under 37 C.F.R. 1.312, received on December 22, 2003, claim 57 is not listed as being allowed in the Notice of Allowance mailed on January 02, 2004. This was an inadvertent error. Claim 57 is allowed and such status is now indicated on the supplemental Notice of Allowance submitted herewith.

Response to Rule 312 Communication	Application No.	Applicant(s)	
	09/759,590	JACOBSON ET AL	
	Examiner	Art Unit	
	ALEX NOGUEROLA	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☒ The amendment filed on 22 December 2003 under 37 CFR 1.312 has been considered, and has been:

a) ☒ entered.


b) ☐ entered as directed to matters of form not affecting the scope of the invention.

c) ☐ disapproved because the amendment was filed after the payment of the issue fee.

Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

d) ☐ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.


 Alex Noguerola
 Primary Examiner
 Art Unit: 1753

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 3

PATENT NO. : 6,790,328 B2
APPLICATION NO.: 09/759,590
ISSUE DATE : 09/14/2004
INVENTOR(S) : Stephen C. Jacobson et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims:

Column 10: Claim 9 should read as follows.

9. A method of spatially confining a material stream in a microfluidic device, said method comprising the steps of:

providing a microfluidic device that includes a substrate having first, second, third, and fourth microchannels formed therein, wherein said first, second, third, and fourth microchannels communicate at a first intersection, said first microchannel is connected to a source of a first material, and said third and fourth microchannels each contain buffer material;

providing a first focusing channel in said substrate having one end in fluid communication with a source of a focusing material and a second end in fluid communication with said first channel between said source of the first material and the first intersection;

transporting a stream of the first material through said first channel toward the first intersection, said stream of first material having a width;

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Dann, Dorfman, Herrell and Skillman, P.C.
1601 Market Street, Suite 2400
Philadelphia, PA 19103-2307

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 2 of 3

PATENT NO. : 6,790,328 B2
APPLICATION NO.: 09/759,590
ISSUE DATE : 09/14/2004
INVENTOR(S) : Stephen C. Jacobson et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

transporting a stream of the focusing material from the first focusing channel into said first channel, such that the width of the stream of first material in said first channel is narrowed;

transporting streams of the buffer material through the third and fourth channels into said first channel;
and

controlling flow of the buffer material from the third and fourth channels into the first channel such that the buffer material expands, maintains, or further. confines the stream the first material.

Column 10: Claim 10 should read as follows.

10. A method as set forth in Claim 9 comprising the steps of:

providing a second focusing channel in said body having one end in fluid communication with a source of focusing material and a second end in fluid communication with said first channel between the source of the first material and the first intersection; and

transporting a second stream of the focusing material from the second focusing channel into said first channel such that the width of the stream of the first material in said first channel is narrowed .

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 3 of 3

PATENT NO. : 6,790,328 B2
APPLICATION NO.: 09/759,590
ISSUE DATE : 09/14/2004
INVENTOR(S) : Stephen C. Jacobson et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 10: Claim 11 should read as follows.

11. A method as set forth in Claim 10 wherein the first material, the focusing streams, and the buffer material are transported through their respective microchannels electrokinetically, by pressure, or by a combination of electrokinetic and pressure driven means.

Column 10: Claim 12 should read as follows.

12. A method as set forth in Claim 9 wherein the first material, the focusing stream, and the buffer material are transported through their respective microchannels electrokinetically, by pressure, or by a combination of electrokinetic and pressure driven means.

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